IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A propylene polymer which satisfies the following requirements (1) to (4):

(1) $\Delta H \geq 0.45\ Tm + 22$, wherein ΔH is a heat of fusion (J/g) and Tm is a melting point (°C) measured through differential scanning calorimetry;

(2) $110 \leq Tm \leq 140$, wherein Tm is the melting point;

(3) $Th \leq 5$, wherein Th is a half-value width (°C) of the peak top of its elution curve, the elution curve being obtained in programmed temperature fractionation where a sample solution in o-dichlorobenzene is fractionated by raising the temperature from 0°C to 135°C at a heating rate of 40°C/hr; and

(4) an intrinsic viscosity $[\eta]$ of 0.5 to 5 dl/g when measured in a solvent of tetralin at 135°C.

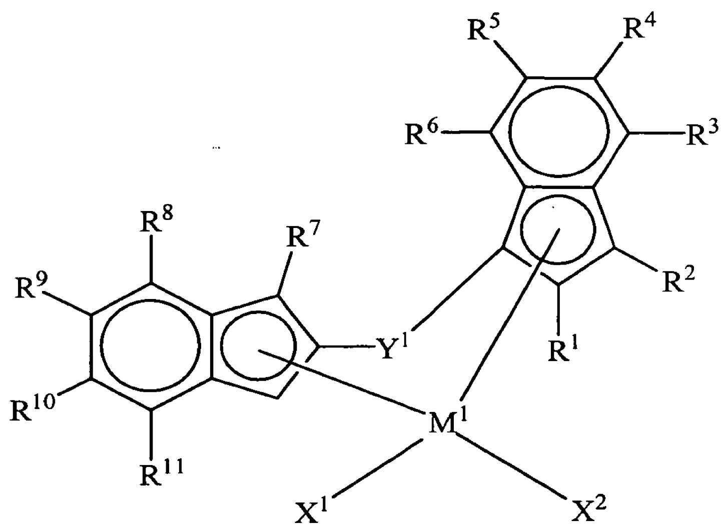
Claims 2-11 (Cancelled).

Claim 12 (Previously Presented): The propylene polymer as claimed in claim 1, which is a propylene homopolymer having an isotactic pentad fraction (mmmm) of from 65 to 85 mol%.

Claim 13 (Previously Presented): The propylene polymer as claimed in claim 1, which is a propylene homopolymer having an isotactic pentad fraction (mmmm) of from 70 to 80 mol%.

Claim 14 (Previously Presented): A molding obtained by molding the propylene polymer of claim 1.

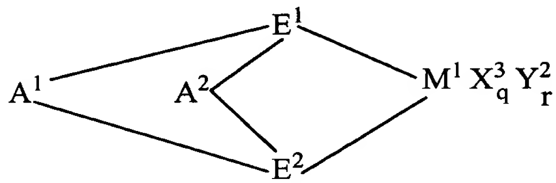
Claim 15 (Previously Presented): A method for producing the propylene polymer of claim 1, which comprises polymerizing propylene or propylene with ethylene and/or an α-olefin having from 4 to 20 carbon atoms, in the presence of an olefin polymerization catalyst that contains (A) a transition metal compound of the Group 4 of the Periodic Table represented by the following general formula (1), and (B) at least one compound selected from the group consisting of (B-1) aluminiumoxy compounds and (B-2) ionic compounds, the ionic compounds being capable of reacting with the transition metal compound to give cations:



(1)

wherein R^8 and R^{11} are each hydrogen, R^1 to R^7, R^9 to R^{10}, and X^1 and X^2 each independently represent a hydrogen atom, a halogen atom, a hydrocarbon group having from 1 to 20 carbon atoms, a halogen-containing hydrocarbon group having from 1 to 20 carbon atoms, a silicon-containing group, an oxygen- containing group, a sulfur-containing group, a nitrogen-containing group, or a phosphorus- containing group; R^3 and R^4, and R^8 and R^9 may be bonded to each other to form a ring; Y^1 is a is a divalent bridging group that bridges the two ligands, representing any of a hydrocarbon group having from 1 to 20 carbon atoms, a halogen-containing hydrocarbon group having from 1 to 20 carbon atoms, a silicon-containing group, a germanium-containing group, a tin-containing group, -O-, -CO-, -S-, -SO_2-, -NR^{12}-, -PR^{12}-, -$P(O)R^{12}$-, -BR^{12}- or -AlR^{12}-; R^{12} represents a hydrogen atom, a halogen atom, a hydrocarbon group having from 1 to 20 carbon atoms, or a halogen-containing hydrocarbon group having from 1 to 20 carbon atoms; M^1 represents titanium, zirconium or hafnium.

Claim 16 (Previously Presented): A method for producing the propylene polymer of claim 1, which comprises polymerizing propylene or propylene with ethylene and/or an α-olefin having from 4 to 20 carbon atoms, in the presence of an olefin polymerization catalyst that contains (A) a transition metal compound of the Group 4 of the Periodic Table represented by the following general formula (2), and (B) at least one compound selected from the group consisting of (B-1) aluminiumoxy compounds and (B-2) ionic compounds, the ionic compounds being capable of reacting with the transition metal compound to give cations:



. . . (2)

wherein M^1 represents titanium, zirconium or hafnium; E^1 and E^2 each are a ligand selected from a cyclopentadienyl group, a substituted cyclopentadienyl group, an indenyl group, a substituted indenyl group, a heterocyclopentadienyl group, a substituted heterocyclopentadienyl group, an amido group, a phosphido group, a hydrocarbon group and a silicon-containing group, and they form a crosslinked structure via A^1 and A^2, and they may be the same or different; X^3 represents a σ-bonding ligand, and a plurality of X^3's, if any, may be the same or different, and it may be crosslinked with other X^3, E^1, E^2 or Y^2; Y^2 represents a Lewis base, and a plurality of Y^2's, if any, may be the same or different, and it may be crosslinked with other Y^2, E^1, E^2 or X^3; A^1 and A^2 each are a divalent crosslinking group that crosslinks the two ligands, representing any of a hydrocarbon group having from 1 to 20 carbon atoms, a halogen-containing hydrocarbon group having from 1 to 20 carbon atoms, a silicon-containing group, a germanium-containing group, a tin-containing group, -O-, -CO-, - S-, $-SO_2-$, $-NR^{12}-$, $-PR^{12}-$, $-P(O)R^{12}-$, $-BR^{12}-$ or $-AlR^{12}-$; R^{12} represents a hydrogen atom, a halogen atom, a hydrocarbon group having from 1 to 20 carbon atoms, or a halogen- containing hydrocarbon group having from 1 to 20 carbon atoms; and A^1 and A^2 may be the same or different; q is an integer of from 1 to 5, indicating ((valence of M^1) -2); and r is an integer of from 0 to 3.

Claim 17 (Previously Presented): The method for producing the propylene polymer as claimed in claim 15, wherein propylene or propylene with ethylene and/or an α-olefin having from 4 to 20 carbon atoms is polymerized in a vapor phase.

Claim 18 (Previously Presented): The method for producing the propylene polymer as claimed in claim 15, wherein propylene or propylene with ethylene and/or an α-olefin having from 4 to 20 carbon atoms is polymerized in the presence of liquid propylene.